

September 11, 1962

25X1A

Dear Jack:

I have been thinking about your problem of disposing of a strip map. Assuming that the map can be destroyed each time after its immediate usefulness is past, there are at least five ways this can be accomplished.

1. By radioactive means.
2. By fire.
3. By use of a non-permanent image.
4. By bleaching the image.
5. By chemical destruction.

For reasons that will be evident as we go along, I finally settled on the last method.

Destruction by radiation is only possible if the film has not been fixed. This means that the map would be light sensitive and preparation, editing, review, etc., would be complicated. This, plus the radiation hazard, makes this method undesirable if our means exist.

Fire just isn't certain enough. Film doesn't support combustion very well when in roll form. I don't like carrying an igniter, etc., in the vehicle. The main self-destruct mechanism if there is one will be enough worry without adding another hazard.

The non-permanent image might be practical, but it has complications. Certainly the time limits imposed in preparation, briefing, loading, possibility of aborts or delays make it uncertain that the image would disappear at any particular point in time with reference to position in flight. It might be possible to bring the image back in some manner.

Bleaching is relatively easy but, while it is not well advertised, the image can be restored.

These methods, therefore, all have disadvantages. There is a different method of chemical treatment which is more certain because it actually destroys the gelatin of the emulsion. My scheme is something like this. The take-up cassette would actually be a tub or a reservoir for a solution. The film after use would be fed down into the liquid and then wrapped up on

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itself in normal roll form. Within a very few minutes not only would the image be destroyed, but I doubt if the roll could be unwound. If space right at the take-up cassette is limited, I suspect we could put the reservoir elsewhere. This just makes the installation a little more complicated.

The projector would have to have an emergency fast slew forward so that all of the film could be wound forward into the take-up cassette if necessary.

To start the ball rolling, we would have to know:

1. Type of film.
2. Width and length.
3. Normal take-up speed.
4. Maximum amount of film requiring fast slew.
5. The number of minutes we have to work with after the "panic" button is pushed.


From this we can do some experimenting and determine the amount of the liquid and its concentration. After this it would be necessary to work with the equipment and vehicle manufacturer on the details of application. If you can furnish advance details of the mechanism, such as a drawing, I could start thinking about that end of it also.

The liquid, while non-corrosive to metals and having a high vapor pressure, is hazardous to humans if it comes in contact with the skin (or if swallowed). Nevertheless, I am sure we can design a safe method of handling it. I would prefer, because of the hazard, to have all loading and unloading operations done by my own people at

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I would prefer not to tell anyone any more about the process other than what it accomplishes - i.e., film destruction. Even the information in this letter is potential dynamite so please limit your discussion of it as much as possible. I doubt if the equipment manufacturer need know more than what is required from him - size and shape of cassette, fast slew mechanism, etc.

ELG/MDG


E. L. G.